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(cont)

directed spring force against the sleeve that slows the response of the movement of the armature along the axis in the first and second directions when the electromagnetic coil is energized.

21. (Twice Amended) A method of stabilizing an electromagnetically operated actuator, comprising:

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providing a coil and an armature, the armature being disposed for movement in a first direction and a second direction opposite the first direction along the axis in the sleeve, the armature having at least one groove formed on an exterior surface thereof;

moving the armature along the axis as a response to energization of the coil; and

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exerting a radially outwardly directed force against the sleeve by a single continuous member disposed in the at least one groove that is in direct contact with the sleeve so as to slows the response of the movement of the armature along the axis in the first and second directions when the electromagnetic coil is energized.

22. (Twice Amended) An apparatus, comprising:

a sleeve extending along an axis and having at least one groove formed on an interior surface thereof;

an armature, the armature being disposed for movement in a first direction and a second direction opposite the first direction along the axis in the sleeve;

an electromagnetic coil operative to cause movement of the armature as a response to energization of the electromagnetic coil; and

a single continuous spring member disposed in the at least one groove in the sleeve and in direct sliding contact with the armature, wherein the spring member exerts a friction force against the armature that slows the response of the movement of the armature along the axis in the first and second directions when the electromagnetic coil is energized.

28. (Twice Amended) An apparatus, comprising:

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an armature having at least one radial opening formed therein;

a sleeve extending along an axis, the armature being disposed for movement in a first direction and a second direction opposite the first direction along the axis in the sleeve;

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an electromagnetic coil operative to cause movement of the armature along the axis as a response to energization of the electromagnetic coil;

a spring member disposed in the at least one radial opening in the armature; and

a ball bearing disposed on one end of the spring and in sliding contact with the sleeve, wherein the bearing member exerts a radially outwardly directed force against the sleeve that slows the response of the movement of the armature along the axis in the first and second directions when the electromagnetic coil is energized.

32. (Twice Amended) An apparatus, comprising:

an armature;

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a sleeve extending along an axis, the armature being disposed for movement in a first direction and a second direction opposite the first direction along the axis in the sleeve;

an electromagnetic coil operative to cause movement of the armature along the axis as a response to energization of the electromagnetic coil; and

a single continuous spring member in sliding contact with one of the armature and the sleeve, wherein the spring member creates a friction force between the sleeve and the armature that slows the response of the movement of the armature along the axis in the first and second directions when the electromagnetic coil is energized.
